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## EDITORIAL

### MEDICAL PROVERBS, APHORISMS AND EPIGRAMS

Proverbs, as terse, net summations of folk-wisdom, are supposed to emanate from the heart of the people; but like the first rock paintings of prehistoric man or the rude beginnings of folk-music, they were inevitably the product of a few individuals of superior intelligence within the tribal group. Conceived mathematically as a mode of energy, like heat, light or electromotive force, mind obviously cannot function *via* dispersed groups but only through an individual unit. *A fortiori*, the genuine products of mind never emanate from crowds, activated by "herd instincts" of the most rudimentary order. The celebrated dictum of Gabriel Tarde, that "the collective intelligence of a crowd is less than that of any one of its individual members" is a hard proposition for the sentimental to digest, but it explains many of the mishaps which have befallen humanity and to which it is still liable. Were crowds activated by collective "intelligence," the political changes wrought by the French and Russian Revolutions would have been effected without violence and with a minimum expenditure of energy; there would have been no World War, and "organization" for business or military enterprises would be superfluous. Crowds may be trained but they cannot think. A mob in an emotional state is, in the accurate view of the Italian Campanella, "a beast with muddy brain," and this condition is likely to remain constant as long as man remains man. It is for this reason, as Renan says, that humanity has been so frequently "betrayed by its leaders." When the Scotch clansmen spoiled a movement they did not fancy by melting away from it, the "crowd" happened

to be made up of hard-headed, close-reasoning units, each operating on his own initiative and responsibility.

The first thing noticeable about folk proverbs is their strong family likeness in space and time. Dealing, as they do, with the fundamental needs and instincts of humanity, they necessarily run to pattern; are concerned with a limited number of basic principles of action and conduct, which crop up monotonously in the remotest regions, under the strangest guises. The next most remarkable thing about them is their extraordinary pungency and cynicism, the harsh wisdom of the countryside, whether around an African kraal, a roadside farm in Jugo-Slavia or on a Siberian steppe. The jabs and jibes at women, for instance, are as cruel and direct as those of the old dramatists or the cynics of the 18th century. Folk proverbs are the bitter fruits of tribal experience, crystallized into word-of-mouth literature by some spirit keener than the rest, the most salient example conceivable of Cowper's (and Herbert Spencer's) distinction between wisdom and knowledge. And here, thrown at the start upon his own bare resources, the primitif is at one with the great physician-philosopher who originated the humoral pathology: <sup>1</sup>

"We mortals are no kings  
For each of whom to sway  
A new-made world upsprings,  
Meant merely for his play;  
No, we are strangers here! the world is from of old.  
  
Born into life!—in vain,  
Opinions, those or these,  
Unalter'd to retain  
The obstinate mind decrees;  
Experience, like a sea, soaks all-effacing in.  
  
This is not what man hates,  
Yet he can curse but this,  
Harsh Gods and hostile Fates  
Are dreams! this only *is*—  
Is everywhere; sustains the wise, the foolish elf."

<sup>1</sup> Matthew Arnold: *Empedocles on Etna*. The line of thought in this drama is derived from the poetic fragments of Empedocles and Parmenides. What Swinburne calls "the long and lofty chant of Empedocles" is a kind of breviary or *credo* of the individualized Greek physician of the period.

City-bound people, standardized as to ways and means by the social and economic forces which bring them into the world, feed, clothe, shelter, tend and bury them, have no such rugged wisdom as this, usually emanating from infertile, sparsely settled areas and suggesting the startling relation which Lowell noted between the observations on life in the classics and their daily confirmation in the files of the morning newspaper. Let us begin for example, with the folk-proverbs of West Africa:

Filthy water cannot be washed.  
 Silence is might.  
 Law-makers—law breakers.  
 Loss of teeth and marriage spoil a woman's beauty.  
 Pus (scandal) will not flow from a boil you do not have.  
 Poison should be tried out on a frog.  
 The looks of a dog betray his pedigree.  
 A dog that refuses to eat garbage will go hungry.  
 The crane said to his children: out with you!  
 A coward will never accomplish great things.  
 Why worry? To be divorced does not mean to die.  
 The head of a guinea fowl carries no burden.  
 A letter has only half the value of a personal call.  
 Peace is made by the edge of the sword.  
 The back of a chicken does not mind mosquitoes.<sup>2</sup>  
 Water never loses its way.  
 A talkative bird will not build a nest.  
 To call a dog do not carry a stick.  
 Big elephants often have small tusks.  
 A bloodsucker will always manage to live.  
 An easy life is the death of valor.  
 If you pass the same tree twice, you may be sure you are lost.  
 The child of a leopard will be a leopard.  
 No slave can free another.  
 A cripple will rarely bring shame upon himself.  
 A butcher who does not bathe is not patronized.  
 No monkey makes fun of another.  
 The hut of a bachelor is never free from evil odors.  
 No sane man will parade with a stolen goat.  
 Put the meat away and you'll get rid of the flies.

<sup>2</sup> In some parts of Continental Europe, reduction of malaria has been attempted by surrounding habitations with live stock, to draw the *Anopheles* away from human skins.

As close observation of life goes, a great general, statesman, scientist or captain of industry could not have done better. We have emerged from the realm of supernatural causes, the Mumbo Jumbo bogies of the tribesmen, into the world of reality. Things are brought down to brass tacks. Some important biological findings of recent vintage are clearly stated and we begin to sense the force of Renan's dictum: *La science est roturière*. The horizon is of brass and iron, with never a lift into the blue for the human spirit. Such keen perceptions of actuality could only originate, as we have said, through some superior intelligence within the tribe. Contrast these, now, with the folk-wisdom of a more advanced and specialized civilization, that of Japan.

A cheap purchase is money lost.

A fog cannot be dispelled with a fan.

He who makes the first bad move always loses the game.

A knowledge of the sacred books is the beginning of sorrow.

What is quickly learned is soon forgotten.

Even the lords of hell bow the knee to the fat purse.

Every man carries a parasite somewhere.

Only the poor give alms to the poor.

Even the dog of a great man wears a proud look.

Lend money to a city, never to a man.

Not all married women are wives.

If a man is poor and humble, even his own wife and children will despise him.

A man's character depends upon whether he has good or bad friends.

Deceive, but don't insult the rich and powerful.

It is easier to rule a kingdom than to regulate a family.

A beaten soldier fears a reed.

A man learns little from victory but much from defeat.

Under a strong general there are no feeble soldiers.

Here we have already advanced several stages in sophistication; we are no longer concerned with the bare essentials of existence but are dealing with a highly organized and very old civilization. In the case of France, a civilization not so old but which has aged more rapidly, it is significant that nearly all the current proverbs of consequence are actually the work of famous men of letters. The rest are merely replicas of the common stock of folk-wisdom of other nations:

The absent are always in the wrong.  
 A good lawyer is a bad neighbor.  
 Lazy people are always anxious to be doing something.  
 The unfortunate are easily wounded.  
 It is a very vicious animal; if attacked, it will defend itself.  
 When a man begins to reason, he ceases to feel.  
 The head of a fool never whitens.  
 The destiny of nations depends upon what they eat.  
 It is to our faults that we owe our virtues.  
 One bad general is better than two good ones.  
 A life run by rules is but a prolonged mode of disease.  
 He who complains most is not the most hurt.  
 Wounded conceit never forgives.  
 The daughters of the poor are their revenge upon the rich.  
 Weakness is more opposed to virtue than vice itself is.  
 To tell stories is the sign of a commonplace mind.  
 Fear creates gods; boldness makes kings.  
 There is something in the misfortunes of our best friends which is not displeasing to us.

By contrast, the Irish proverbs have the charm which comes of an easier going, gentler, more tolerant, humorous, whimsical, and, by the same token, more poetic outlook on life:

Hills look green that are far away.  
 To address a head without knowledge is like the barking of a dog in a green valley.  
 The stars make no noise.  
 God is not as severe as He is said to be.  
 A sweet tongue is seldom without a sting to its root.  
 The daughter of an active old woman makes a bad housekeeper.  
 The seekin' for one thing will find another.  
 A long disease doesn't tell a lie; it kills at last.  
 He is scant of news that speaks ill of his mother.  
 A meeting in the sunlight is lucky and a burying in the rain.  
 A chance shot will kill the devil.  
 In youth we have our troubles before us; in age, we leave our pleasures behind.  
 A spender gets the property of the hoarder.  
 A big belly was never generous.  
 A wild goose never laid a tame egg.  
 Better be idle than workin' for nothing.  
 It's better to be lucky than wise.  
 The fox never found a better messenger than himself.  
 Women are stronger than men; they never die of wisdom.

The same tendency is noticeable in the proverbs of Spain, *e.g.*, the case of the famous donkey "who died of other people's troubles." The folk-saws of England, Scotland and Germany get down to bed rock again. What a wealth of physiological observation is implied, for instance, in the English proverb, "Coarse mothers have comely children," or the German, "*Schöne Leute sterben leicht*" (Beauty is easy to kill) or "*Unkraut vergeht nicht*" (Weeds never die). Physical sturdiness may be perpetuated in families, but, apart from other factors, it actually takes a definite amount of substance and many foot-pounds of potential energy to create physical good looks; and we should marvel at the generation of the beauties of old time could we but see the strange saurians and pterodactyls who begat them. The decline of individualized beauty was noted several decades ago and the advent of the period of universal prettiness can be verified on the streets of any city to-day. "Many's the thing can be made for the penny" said the auld Scots wife when she saw the poor black boy. The medical interest of folk-proverbs is, thus, not so much in pathological, as in physiological and psychological observations, the things an observant physician notes by the way in his practice. As is plain from the various collections of medical folk-lore, the actual wisdom of the people with reference to the healing art is apt to be poor stuff. The people are, in fact, the main supporters of quackery, and modern quackery, as Sudhoff affirms, is but a theft from the most ancient phases of folk-medicine.

Dr. Wang Chi Min, of Hangkow, has latterly published an interesting series of 300 Chinese medical sayings and proverbs,<sup>3</sup> some emanating from popular wisdom, others allocated to authors or medical texts. In these, which may be taken as fairly representative of the medical wisdom of China over many centuries, the popular adages are, curiously enough, of practical (clinical) import; the literary are concerned mainly with prognosis and medical philosophy.

<sup>3</sup> Wang Chi Min: Rep. North Manchurian Plague Prev. Service, Tientsin, 1926, V, 300-315.

POPULAR SAYINGS

The unlucky doctor treats the beginning of an illness; the fortunate doctor the end.

The appearance of a disease is swift as an arrow; its disappearance slow, like a thread.

When a disease relapses, there is no cure.

Nine out of every ten men have piles.

Out of ten persons, eleven have the itch.

Rather marry a leprous wife than eat chicken reared by a leper.

A wife's leprosy does not pass over to her husband.

If a child is constantly sick, it is due to overfeeding.

In a dangerous illness, call in three doctors.

It is easy to get a thousand prescriptions, but hard to get one single remedy.

Feed a dysentery; starve a typhoid.

In typhoid, treat the beginning; in consumption, don't treat the end.

For colic, get the bowels open.

Rather treat ten men than one woman.

No good doctor should enter the house of a crooked official.

To take one leg of a fly is equivalent to a strong purge.

Diarrhoea is a river-fish complaint.

Before thirty, men seek disease; after thirty, diseases seek men.

LITERARY APHORISMS

A good doctor is equal to a good premier. Lu Chi.

The doctor controls life and death. Shi Chi.

Men worry over the great number of diseases; doctors worry over the small number of remedies. Pien Chiao.

To become a good doctor requires breaking the arm three times. Tso Chuan.

Wide reading increases knowledge of disease; some clinics give experience in diagnosis; repeated tests make properties of drugs better known. Ch'u Shih.

When a disease reaches the heart, no medicine can cure. Tso Chuan.

A disease often gets worse after having been a little better. Han Shi.

The sage does not treat those who are ill, but those who are well. Su Wen.

The able doctor acts before sickness comes. Liu Kung Cho.

When you treat a disease, first treat the mind. Chen Jen.

You can remove the trouble, if you know the cause. Mo Tzu.

A dirty cook gives diarrhoea quicker than rhubarb. Tung-Su Pai.

To avoid sickness, eat less; to prolong life, worry less. Chu Hui Weng.

Intermarriage of blood relatives affects the offspring. Shih Pai.

Here, in spite of rather hazy semeiology and prognosis, we have, at length, something approaching the tendency

of the Hippocratic aphorisms; but to compare the two is to realize that Greek medicine is the true starting point of modern medical science. For convenience of readers, the following arrangement of outstanding sentences from the total Hippocratic Canon has been allocated, in each case, to the bilingual of Littré, the references to the French translation being across the page:

#### SENTENCES FROM THE HIPPOCRATIC CANON

The physician who is also a philosopher is godlike (Littré, ix, 232-233).

The highest duty of medicine is to get the patient well; of several effective remedies, choose the least sensational (iv, 312-13).

Wherever the art of medicine is loved, there also is love for humanity (ix, 258-9).

Physicians are many in title but few in reality (iv, 638-9).

The physician whose mistakes are negligible wins my unqualified praise (i, 590-91).

Life is short, art is long, occasion fugitive, experience fallacious and judgment difficult (iv, 458-9).

Where the physician can do no good, let him do no harm (ii, 634-71).

Natural forces within us are the true healers of disease (v, 314-15).

To do nothing is sometimes a good remedy (iv, 172-3).

The art of medicine consists in three things, the disease, the patient and the physician. The physician is the servant of the art and the patient must combat the disease along with the physician (ii, 636-7).

Science begets knowledge, opinion ignorance (iv, 642-3).

Timidity shows want of power, temerity want of art (iv, 640-641).

For extreme diseases, extreme remedies (iv, 462-3).

Medicine originated through sheer necessity, for the sick did not, and do not, profit by the same régime as the healthy (i, 572-3).

I also maintain that clear knowledge of natural science can be acquired from medicine alone (i, 620-621).

An important phase of medicine is the ability to appraise the literature correctly (iii, 100-103).

In the cities, medicine is the only calling in which errors are penalized by disgrace alone, and that does not hurt those who are familiar with it (iv, 638-9).

In athletes, extreme stoutness is dangerous (i, 3).

Use strengthens, disuse enervates (iii, 324-5).

Use and wont insure the best manual training (vi, 90).

Nature needs no instruction (ix, 112-13).

The human soul develops up to death (v, 314).

Nothing is ever lost [in nature], nor does anything originate which did not exist before (vi, 474).

For grave diseases, the most exact treatment is the most effective (iv, 462-3).

One must know to what diseases the natural disposition of the body inclines (v, 488).

Work is necessary to health (vi, 468).

Never work when hungry (iv, 474-5).

Let exercise come before meals (v, 314-15).

Bloodletting should be done in the springtime (iv, 592-3).

Sudden exertion is harmful to the sedentary (vi, 582).

Spontaneous lassitude indicates disease (iv, 470-71).

Overeating brings on illness, as shown by the treatment (iv, 474-5).

Fat persons are more exposed to sudden death than the slender (iv, 482-3).

Liquid diet is a better restorative than the solid (iv, 472-3).

Light diet is indicated at the height of an acute disease (iv, 464-5).

Insensibility to great pain shows that the mind is affected (iv, 470-71).

The lethargic have slow pulse (v, 610-11).

Those who swoon frequently, and without apparent cause, are liable to die suddenly (ii, 41).

A brusque answer from a modest patient is a bad sign (v, 522-3).

Autumn is bad for consumptives (iv, 490-91).

Labored sleep in any disease is a bad sign (iv, 470-471).

Sleep following upon delirium is a good sign (iv, 470-71).

Rain waters are naturally the best, but they need to be boiled and purified from foulness (ii, 36-37).

Observe head wounds from a distance and without touching them (ii, 21).

When life was seen to ooze away in wounded people, the blood was naturally mistaken for the soul of man (vi, 40-41. *Æneid*, ix, 349).

There should be no dressing for wounds except alcohol, for in wounds, the dry state approximates to the healthy and the moist to the unhealthy (vi, 400-401).

Of simultaneous pain in two places, the lesser is obliterated by the greater (iv, 482-3).

What drugs do not heal, surgery heals; what the knife does not heal the cautery heals; what the cautery does not heal is incurable (iv, 608-9).

Spasm supervening upon a wound is dangerous (iv, 532-3).

As a rule, the outward appearance and characteristics of people are an effect of their native soil (ii, 90-91).

Change of climate is endurable in chronic diseases (v, 318-19).

Most Scythians become impotent, do women's work, live and converse like women (i, 76-77).

Gout in young men comes only from sexual dissipation (vi, 30).

Old persons have fewer diseases than the young but chronic diseases never leave them (iv, 480-83).

Fasting is most easily endured by old people, next by adults, next by the young people and least of all by children, particularly the most lively (i, 13).

Prognosis is uncertain in acute diseases (iv, 474-5).

Spinal deformity often coexists with cough and tubercle of the lungs (iv, 180-81, 574-75).

The incidence of phthisis is commonly between the ages of 18 and 35 (iv, 534-5).

For hysterical maidens, I prescribe marriage, for they are cured by pregnancy (viii, 468).

Hiccough disappears upon sneezing (iv, 566-7).

The breathing (of Philiscus) was rare and large, like that of a person recollecting himself (ii, 684-5).

Diarrhoea in phthisis is bad (v, 14).

Epistaxis in amenorrhea is good (iv, 544-5).

Hardening of the liver in jaundice is bad (iv, 574-5).

If a convalescent eats heartily, yet does not take on flesh, it is a bad sign.

I have never seen people over fifty recover from renal disease (v, 344).

Concussion of the brain is always accompanied by loss of speech (vii, 58)?

Wine is not good in delirium (vi, 218-19).

Good wine will dissipate hunger (iv, 476-7).

Honey and wine were made exquisitely for men, if taken at the proper time and in just measure (vi, 270-71).

An intelligent person must know how to help himself in disease, bearing in mind that health is the highest good of man (vi, 86, 87, 208-9).

Things sacred should be imparted to sacred persons only; and it is not lawful to impart them to the profane until they have been initiated into the mysteries of the science (iv, 642-3).

Aristotle is interesting as the standard-bearer of the Hippocratic tradition that from medical reasoning came the principles of scientific method. As the greatest biologist of antiquity, he illustrates the remarkable aptitude which physicians have continually displayed in sciences other than the medical.

#### ARISTOTLE

It is the business of a scientist to know the causes of health and disease, whence it follows that most scientists regard medicine as the goal of their studies, while physicians who practice in a scientific manner begin the study of medicine with natural science (*Æsthetics*, Introduction).

Conscientious and careful physicians allocate causes of disease to natural laws, while the ablest scientists go back to medicine for their first principles. (*Æsthetics*, Terminal).

The ablest physicians attach most importance to an exact knowledge of the human frame. (*Nichomachean Ethics*, i. 13).

To cure oneself by the book is bad and an experienced physician far preferable. For he acts not from personal views or any thing unreasonable, but heals the patient and expects to be paid for it. Politicians, acting from personal likes and dislikes, mistrust doctors as likely to compass their deaths

in the service of enemies and so they prefer healing out of books. The physician himself, if sick, actually calls in another physician, knowing that he cannot reason correctly if required to judge of his own condition while suffering. (*De Republica*, iii, 16).

Very important for the conduct of a life devoted to science are the views of Aristotle in his three treatises on ethics. In the *Nichomachean Ethics*, the reasoning is as follows:

Human good is happiness. The highest happiness lies in divine wisdom. Human happiness turns upon practical prudence and virtue. Pleasure lies in activity (motion) and is a physical state turning upon activity of the soul. The soul is rational and irrational. Moral virtue is rational when irrational desires are subjected to reason. Intellectual virtues are two: practical deliberation (prudence, common sense) and scientific speculation (wisdom).

In the *Eudemian Ethics*, good fortune is irrational and continuous (divine impulse) or discontinuous (deliberate action); gentility is the control of desire by reason for the sake of honor.

In the *Magna Moralia*, good fortune becomes lawless nature (*aloges physis*), but to the gentleman, really good things are good, really honorable things honorable.

Consciously or unconsciously, the following were literally the leading motives in the blameless lives of such great physicians and biologists as Harvey and Malpighi, Darwin and Huxley, Johannes Müller and Helmholtz, Claude Bernard and Pasteur:

Happiness, then, stands not in amusement; in fact, the very notion is absurd of the end being amusement, of one's toiling and enduring hardship all one's life long with a view to amusement alone . . . but to amuse oneself with a view to steady employment afterwards, as Anacharsis says, is thought to be right; for amusement is restful, and men want rest because unable to labor continuously. (*Nichomachean Ethics*, x, 6).

Now, he who works in accordance with, and pays observation to pure intellect, and tends this, seems likely to be in the best frame of mind and dearest to the Gods; for if, as we think, any care is given to things human by the Gods, it must be reasonable to suppose that they take pleasure in what is best and most akin to themselves (and this must be pure intellect); and that they requite with kindness those who love and honor this the most, as paying observance to what is dear to them, and as acting rightly and nobly. And it is quite obvious that the man of science chiefly combines all

these; he is therefore dearest to the Gods, and it is probable that he is at the same time most happy. Thus, on this view also, the man of science will be most happy. (*Nichomachean Ethics*, x, 8).

Celsus is best appreciated in full length excerpts. The following sentences, selected and arranged by A. Védrenes, a medical officer in the French Army, reveal the literary quality of this great text, but show no great advance over Hippocrates.

### CELSUS

Greek medicine once comprised three kinds, *viz.*, one dealing with cures by food (Dietetics), the second with drugs (Pharmaceutics), the third by operation (Surgery). Proæmium.

The art of healing has no more solid base than experience. Proæmium.

Other things being equal, a friend as physician is better than a stranger. Proæmium.

Medicine is a conjectural art which is sometimes supported by neither theory nor practice. Proæmium.

Appreciation of the cause sometimes puts us on the track of the remedy. Proæmium.

The art of medicine has almost no constant rule. Proæmium.

Transition from a safe to a harmful climate, or *vice versa*, is not without danger (i, 3).

Changes in one's mode of life should be made gradually (i, 3).

An idle existence is hazardous, for some day one may have to work (i, 3).

Change of occupation may be fatiguing, and is remedied by resuming one's original employ (i, 3).

Always aid the organ which suffers most (i, 3).

There are some individual constitutions, of which nothing may be predicted without knowing them (ii, 2).

We should not impute the faults of the physician to his art (ii, 6).

Better an untried remedy than none at all (ii, 10).

For major ills, major remedies (ii, 11).

Nothing helps indisposition so much as an opportune diet (ii, 16).

There is no recovery which does not owe more to good fortune than to art, whence medicine is helpless where Nature withholds her aid (iii, 1).

It is more excusable for a physician to fail in acute than in chronic diseases (iii, 1).

Asclepiades said that the physician should heal safely, promptly and agreeably (iii, 4).

Boldness often wins, where prudence fails (iii, 9).

There are four diagnostic signs of inflammation: redness and swelling, heat and pain (iii, 10).

The doctor's perseverance often triumphs over the disease (iii, 12).

If the illness is grave, a true phthisis, it should be combatted immediately, for once established, it is not easily subdued. If strength permits, a change

of air by a sea-voyage may be tried, say from Italy to Alexandria . . . Milk is also very proper to take (iii, 22).

Extreme peril authorizes many measures which should be rejected under other circumstances (iii, 18).

Only a charlatan will exaggerate the gravity of an insignificant ailment in order to puff his own importance (v, 26).

In medicine, rules may be absolute, but consequences are variable (vi, 13).

Better a ray of hope than abject despair (vii, 16).

Why should a remedy be certain because it is unique? (vii, 23).

Frivolous minds, possessing nothing, sacrifice nothing; but a great genius honors itself by admitting error, particularly when with the object of for-  
warning posterity as to the mistakes of predecessors (viii, 4).

Galen was not remarkable for concision, indeed, was often "inebriated with the exuberance of his own verbosity." His *longueurs* are nowise the "heavenly lengths" which Schumann found in the divine music of Schubert, but are frankly boring. A few sentences will suffice to show him at his best:

#### GAIEN

Nature did not consider size or shape in varying the structure of organs, nay, structure was determined by difference of function and function is regulated by essential utility. *De usu partium*, vi, 9.

The physician is Nature's assistant. *De humoribus*, i.

Most physicians are like athletes who aspire to victory in the Olympic games without doing anything to deserve it; for they praise Hippocrates as first in the art of healing but make no attempt to resemble him. *Medicus Philosophus*.

He who cannot classify diseases as to genera and species will be deceived as to therapeutic indications. *Ibid.*

There are three sentences of the Alexandrian Herophilus which have made their fortune. The first, showing just what it means for a human being to lose his health, was cleverly versified by the English poet Gay, and is, in effect, the very *raison d'être* of medicine.

#### HEROPHILUS

To lose one's health renders science null, art inglorious, strength effortless, wealth useless and eloquence powerless.

Medicines are nothing in themselves, if not properly used, but the very hands of the gods, if employed with reason and prudence.

He who can discriminate between the possible and the impossible is the wisest physician.

The following sentences, translated by Dr. John D. Comrie (Edinburgh) from the *Regimen Sanitatis*, illustrate the practical dietetic wisdom of the School of Salerno:

Do you wish to be strong and healthy: then shed anxious cares, hold it vulgar to be angry (*irasci crede profanum*), be sparing of wine, sup in moderation, let it not seem useless to rise after a feast, avoid the noonday nap, retain no urine, be not costive. Observe these well and you will live long. Failing doctors, let these three be your doctors: a joyous disposition, rest, a well-regulated diet.

The quaint couplets of Ambroïse Paré illustrate the knack of terse, practical counsel which usually characterizes the surgeon:

#### PARE

Better a tried remedy than a new fangled one.  
Those who work hard escape many kinds of infirmities.  
Always give the patient hope, even when death seems at hand.  
When youth is wakeful and old age drowsy, death is nigh.  
To bed is best for foot, leg or thigh trouble.  
When gangrene is pronounced, nothing will help but the knife.  
I dressed him: God healed him.

A few sentences from Sydenham will convey his quaint literary quality, and these contain some of his basic ideas:

#### SYDENHAM

The art of medicine is to be properly learned only from its practice and exercise.

Nature, in the production of disease, is uniform and consistent, so much so, that for the same disease in different persons, the symptoms are for the most part the same; and the selfsame phenomena that you would observe in the sickness of a Socrates, you would observe in the sickness of a simpleton.

A disease, however much its cause may be adverse to the human body, is nothing more than an effort of Nature, who strives with might and main to restore the health of the patient by the elimination of the morbid humor. Fever itself is Nature's instrument.

The generality have considered that disease is but a confused and disordered effort of Nature, thrown down from her proper state and defending herself in vain.

Simply to enumerate all the symptoms of hysteria would take a long day, so many are they. Yet not more numerous than varied, proteiform and chameleonlike.

Gout, unlike any other disease, kills more rich men than poor, more wise men than simple. Great kings, emperors, generals, admirals and philosophers have all died of gout.

A man is as old as his arteries.

The *lues venerea* was introduced into Europe A. D. 1493 from the West Indies, it being, before that time, unknown, even by name. Hence the disease is usually considered as endemic to the American colonies. In my mind, however, it is rather referable to the coast of Guinea, or to some portion of the Negro country thereabout. . . . The African disease is called yaws.

It is not without reason that Aristotle has observed that melancholy men are men of highest genius.

Dabblers in science lean upon the opinion of the vulgar and so have things their own way, whilst closer observers are received with calumny and ill words. Such, however, they bear with equanimity, satisfied with the approval of a wise minority.

As, indeed, no man can say who it was that first invented the use of clothes and houses against the inclemency of the weather, so also can no investigator point out the origin of medicine, mysterious as the source of the Nile. There has never been a time when it was not.

The great physicians of the 18th Century were more remarkable for sustained elegance of diction and conventional views of things than for aphoristic wisdom. It is convenient to take a long jump to a group of medical men who, about the middle of the 19th century, stated, in clear and unmistakable terms, the ideas which were to be the point of departure of scientific medicine, namely, Virchow, Helmholtz, Claude Bernard and Huxley. In a small pamphlet of 1849 Virchow<sup>4</sup> announced radical and very startling doctrine. In his later utterances, he is more the sceptical man of the world, experienced in practical politics and of extraordinary versatility.

### VIRCHOW

Science in and for itself is nothing, and only becomes something through its promoters, the people. The phrase "science for its own sake" smacks of that inhuman viewpoint in which man regards his soul as the ultimate reality, as his essential existence, manifesting itself as a spirit striving to obtain a corporeal existence.

The touchstone of true science is power of performance, for it is a truism that what can, also will, and thus attains to real existence.

<sup>4</sup> Virchow: *Die Einheitsbestrebungen in der wissenschaftlichen Medicin*, Berlin, 1849.

What is dark and incomprehensible attracts some minds more than what is clear and understandable.

As long as vitalism and spiritualism are open questions so long will the gateway of science be open to mysticism.

Belief begins where science leaves off and ends where science begins.

Belief cannot be reckoned with in terms of science, for science and faith are mutually exclusive.

The task of science is not to attack the objects of belief but to stake out the limits of the knowable and to center consciousness within them.

Spontaneity of thought and freedom of will, as characteristics of our species, are illusions of human pride; for even savages know that, from birth on, there is naught but unconscious reflexes and instincts.<sup>5</sup>

Humanism is neither atheistic nor pantheistic, since it has but one formula for things unknowable, namely: I do not know.

Anthropomorphism is the attempt to reduce philosophic dualism to unity and this *anabasis* commonly follows the familiar pathway of unscience, that of analogy: Its postulates are God as a magnified man and the attribution of infinite dimensions to the human mind.

From the basic error that specific remedies were created for particular diseases came the notion that the whole course of a disease, or even its separate stages, could be annihilated by a single remedy. It was reserved for the ablest physicians of all time to perceive that identical remedies are good only for identical phases of different diseases and that for different phases of the same disease, different remedies are necessary.

Should medicine ever fulfill its great ends, it must enter into the larger political and social life of our time; it must indicate the barriers which obstruct the normal completion of the life-cycle and remove them. Should this ever come to pass, medicine, whatever it may then be, will become the common good of all. It will cease to be medicine and will be absorbed into that general simplified body of knowledge which is identifiable with power. Then will Bacon's prediction be accomplished fact: What seemed causal in theory will become established rule in practice.<sup>6</sup>

Medicine loses none of its worth in shedding the cothurnus and mixing with the people, for whom it acquires new powers.

Physicians are the natural attorneys of the poor and no small part of social problems come under their jurisdiction.

We have not crushed the power of monarchy and the *Junker* in order to elevate a sleek *bourgeoisie* on the shield.

I justify a place in pathology for the leucocytes.

I stand upon my own rights and for that very reason concede rights to others.

Brevity in writing is the best insurance for its perusal.

The conjunction "and" commonly serves to indicate that the writer's mind still functions even when no signs of the phenomenon are noticeable.

<sup>5</sup> This is, of course, the essence of behaviorism.

<sup>6</sup> Here Virchow states very clearly the present unattainable ideals of "social medicine."

Marriages are not normally made to avoid having children.

Has not science the noble privilege of carrying on its controversies without personal quarrels?

Imprisoned quacks are always replaced by new ones.

Laws should be made, not against quacks but against superstition.

If popular medicine gave the people wisdom as well as knowledge, it would be the best protection for scientific and well-trained physicians.

Physicians can only be called such when the ultimate aim of their labors is the healing of disease.

But once we have recognized that disease is naught else than the course of vital processes under altered conditions, the concept of healing expands to imply the maintenance or reestablishment of the normal condition of existence.

Even in the hands of the greatest physicians, the practice of medicine is never identified with scientific (laboratory) medicine, but is only an application of it.

When we have exact knowledge of the conditions of existence of individuals and of peoples, then only will it be possible for the laws of medicine and philosophy to gain the credence of general laws of humanity. Then will the Baconian "knowledge is power" become reality.

After serving as a medical officer in Prussian barracks, where he wrote his epoch-making tract on the Conservation of Energy (1847), Helmholtz abandoned medicine for a brilliant career in mathematical physics. He confirms, in most glowing terms, the view of Hippocrates and Aristotle that medical training, and the kind of reasoning which the physician employs in practice, will also fit the mind for work in the most abstruse branches of pure science. In the entire history of medicine and science, he is the most striking exemplar of this fact.

### HELMHOLTZ

But I look back upon my medical studies as the school which taught me, in a more penetrating and convincing way than any other, the eternal principles of scientific work, principles so simple yet continually forgotten, so clear and yet ever shrouded by a deceptive veil.

Medicine was once the intellectual home in which I grew up and even the emigrant remembers and is best remembered by his native land.

To an old student like myself, the once familiar, somewhat matronly visage of Dame Medicine is barely recognizable, so fresh and vivacious has she become in the rejuvenating spring of natural science.

For him who has to cope with the hostile forces of reality, indifference and romance disappear; what he really knows and can do is put to severe

tests; he must see everything in the hard, clear light of factual experience and can no longer lull himself in agreeable illusions.

Individuals, as well as nations, who wish to rise to the height of manhood must learn to look reality in the face, if it is to be bent to the purpose of the mind. To flee into an ideal world is a false resource of transient success; it only facilitates the play of the adversary, and when knowledge only reflects itself, it becomes unsubstantial and empty, or resolves itself into illusions and verbiage.

The Critique of Pure Reason is a continual sermon against the use of the category of thought beyond the limits of actual experience.

Whoever desires to give his hearers a perfect conviction of the truth of his principles must, first of all, know from his own experience how conviction is acquired and how not. He must have known how to acquire conviction where no predecessor has been before him, i.e., he must have worked on the confines of human knowledge and have conquered for it new territory.

A teacher who retains convictions foreign to himself is all well enough for pupils who depend upon authority as the source of their knowledge, but not for such as require basic convictions of the utmost depth.

It was said of Claude Bernard that he was not so much a physiologist as "physiology personified" (*la physiologie même*). His *Introduction to the Study of Experimental Medicine*, recently translated by Henry Copley Greene (New York, 1927) is the breviary of laboratory workers in this field, of which Bernard himself was, in a very large and real sense, the founder. Never have the working principles of laboratory medicine been stated with such convincing precision as in these luminous sentences.

#### CLAUDE BERNARD

Observation is a passive science, experimentation an active science.

Cuvier expressed the same thought by saying: "The observer listens to Nature; the experimenter questions and forces her to unveil herself."

Pathology includes real experiments which are spontaneous, and not produced by physicians.

Man is naturally metaphysical and arrogant, and is capable of believing that the ideal creations of his mind, which express his feelings, are identical with reality; whence it follows that the experimental method is not naturally a primary appanage of man. It is only after long courses of error in theological and scholastic discussions that he finally acknowledges the sterility of his efforts along these pathways.

In science, the thing is to modify and change one's ideas as science advances.

The science of life is a superb and dazzlingly lighted hall which may be reached only by passing through a long and ghastly kitchen.

Our ideas are only intellectual instruments which help us to penetrate phenomena. We should drop them when they have served their turn, even as one scrap a bistoury grown rusty from long usage.

All natural philosophy is summed up in these terms: to know the laws governing phenomena. Every experimental problem reduces itself to this: to foresee and direct the course of phenomena.

Science repulses the indefinite.

Astronomers limit themselves perforce to observation, as they cannot go to the skies to experiment on the planets.

True science teaches us to doubt and to abstain from ignorance.

A scientific hypothesis is merely a scientific idea, preconceived or pre-visionsed. A theory is merely a scientific idea controlled by experiment.

At first, we feel and believe that absolute truth is ours by right, but study will soon dispel these illusions bit by bit.

Science increases our power in proportion as it lowers our pride.

If I had to define life in a word, it would be: Life is creation.

In pathology, as in physiology, the true worth of an investigator consists in pursuing not only what he seeks in an experiment, but also what he did not seek.

The names of the prime movers of science disappear gradually in a general fusion and the more a science advances, the more impersonal and detached from the past it becomes.

In the arts and literature, personality is everything, for these are spontaneous creations of the mind and have nothing to do with the statement of natural phenomena, in which the mind should not create anything. The past maintains its value through these creations of art and letters. A modern poet has characterized the personality of art and the impersonality of science, as follows: Art is I: Science is We.

The investigator should have a robust faith and yet not believe.

Put off your imagination as you take off your overcoat, when you enter the laboratory; but put it on again, as you put on your overcoat, when you leave the laboratory.

When it is said that great thoughts come from the heart, it means that they come from the feelings, for our feelings, which have their physiological origin in the nerve-centers, act upon the heart like peripheral sensations.

A fact is nothing in itself. It avails only by the idea attaching to it or by the proof which it furnishes.

Man can learn nothing unless he proceeds from the known to the unknown.

We have in our minds an intuition or feeling as to the laws of Nature, but we do not know the form. We can learn it only by experiment.

We usually give the name of discovery to recognition of a new fact, but the idea connected with the fact is, in my opinion, what really constitutes the discovery. Facts are neither great nor small in themselves. A great discovery is a fact whose appearance in science gives rise to shining ideas, whose light dispels many obscurities and shows us new paths.

A discovery is generally an unforeseen relation not included in theory, for otherwise it would be foreseen.

It has often been said that to make discoveries, one must be ignorant . . . . by which is meant that it is better to know nothing than to cherish fixed ideas based on theories whose confirmation we constantly seek, while neglecting everything that fails to agree with them.

We must never make experiments to confirm our ideas, but simply to control them.

The truly scientific spirit should make us modest and kindly. We really know very little and are all fallible in facing the immense difficulties presented by investigation of natural phenomena. United effort is better than to divide and nullify by personal disputes.

The doubter is a true man of science: he doubts only himself and his interpretations, but he believes in science.

Some physicians fear and avoid counterproof; as soon as they make observations confirming their ideas, they refuse to look for contradictory facts, for fear of seeing their hypothesis vanish.

When we begin to base our opinions upon medical fact, on inspiration or on more or less vague intuitions about things, we are outside of science and are exemplars of that fanciful method fraught with greatest dangers, in that the health and life of the patient turn upon the whims of an inspired ignoramus. True science teaches us to doubt and, in ignorance, to refrain.

The uncompromising agnosticism of the youthful Virchow was maintained with breezy, jocund vigor by Huxley, the ablest English prose-writer of his time.

### HUXLEY

The man of science has learned to believe in justification; not by faith, but by verification.

Ecclesiasticism in science is only unfaithfulness to truth.

Science commits suicide when it adopts a creed.

The world is neither wise nor just, but it makes up for its folly and injustice by being damnably sentimental.

Orthodoxy is the Bourbon of the world of thought. It learns not, neither can it forget.

Science is, I believe, nothing but *trained and organized common sense*, differing from the latter only as a veteran may differ from a raw recruit.

A detective policeman discovers a burglar from the marks made by his shoe, by a mental process identical with that by which Cuvier restored the extinct animals of Montmartre from fragments of their bones.

Education is the instruction of the intellect in the laws of Nature, under which name I include not merely things and their forces, but men and their ways.

Next to being right in this world, the best of all things is to be clearly and definitely wrong, because you will come out somewhere. If you go buzzing about between right and wrong, vibrating and fluctuating, you come out nowhere.

If a little knowledge is dangerous, where is the man who has so much as to be out of danger?

Most of the faults and mistakes of the ancient philosophers are traceable to the fact that they knew no language but their own, and were often led into confusing the symbol with the thought which it embodied.

Whatever practical people may say, this world is, after all, absolutely governed by ideas, and very often by the wildest and most hypothetical ideas.

Men can intoxicate themselves with ideas as effectually as with alcohol or bang, and produce by dint of intense thinking, mental conditions hardly distinguishable from monomania.

The living voice has an influence over human action altogether independent of the intellectual worth of what it utters.

It is better for a man to go wrong in freedom than to go right in chains.

Comparable with the aphorisms of Claude Bernard on the approaches to experimental medicine are those of Charcot on the bedside approach to disease. The essence of his teaching was, in fact, the doctrine of the spontaneous approach and the danger of preconceived ideas.

### CHARCOT

To learn how to treat disease, one must learn how to recognize it. The diagnosis is the best trump in the scheme of treatment.

In dealing with a nervous patient, you should regard the malady before you merely as an episode. Thus, in a case of chorea, it is only necessary to inquire how long it has existed. The condition of the patient is only an accident in the history of the disease, just as each of us is only an accident in the history of humanity.

Clinical medicine is made up of anomalies, while nosography is the description of phenomena that occur regularly. What we look for in the clinics is almost always exceptional; what we study in nosography is the rule. It is well to know that, in the practice of medicine, a nosographer is not always a clinician.

Claude Bernard said: We must not subordinate pathology to physiology but the other way around. We must first pose our problem from the actual data of clinical findings and then attempt to give a physiological explanation. To do otherwise is to lose sight of the patient and to distort our conception of the disease.

If the clinician, as observer, wishes to see things as they really are, he must make a *tabula rasa* of his mind and proceed without any preconceived notions whatever. Magendie, we are told, advised the laboratory experimenter to proceed aimlessly. I am almost prepared to recommend this method to the clinical observer.

In the last analysis, we see only what we are ready to see, what we have been taught to see. We eliminate and ignore everything that is not a part of our prejudices.

It is the mind which is really alive and sees things, yet it hardly sees anything without preliminary instruction.

Disease is from of old and nothing about it has changed. It is we who change, as we learn to recognize what was formerly imperceptible.

How is it that, one fine morning, Duchenne discovered a disease which probably existed in the time of Hippocrates?

Why do we have to go over the same set of symptoms twenty times before we understand them? Why does the first statement of a new fact always leave us cold? Because our minds have to take in something which deranges our original set of ideas, but we are all like that in this miserable world.

There is, in any well executed description of disease a remarkable power of transmission. If made at the right time, it will penetrate even the least prepared minds. What had hitherto remained in the womb of nothingness has begun to live. A description of a hitherto unknown species of disease is an event, a very great event, in pathology.

In medicine, even the most stoical intelligences have not been able to confine themselves to simple statement of fact; there is always the tendency to bring facts into relation with some theory or other. It appears to be a necessity of the human mind.

Allbutt's teaching, already set forth at length in these pages,<sup>7</sup> took another line, namely that, in clinical medicine, we should never confuse the symbol (the name or fictive concept of the disease) with the real thing (the patient before us):

#### ALLBUTT

In mediæval times, so fastidious were logic and abstraction that practice became a vulgarity, and he was the greatest teacher who carried his pupils furthest from things.

Medicine likewise, because it deals with things, has always been for our serener circles a Cinderella, blooming maid as happily as she has grown nevertheless.

We find, in ruling classes, and in social circles which put on aristocratical fashions, that ideas, and especially scientific ideas, are held in sincere aversion and in simulated contempt.

The Greek was an individualizing and an emancipating spirit, the mediæval collective and enthralling—a genius of assemblies and associations of men.

In science, law is not a rule imposed from without, but an expression of an intrinsic process. The laws of the lawgiver are impotent beside the laws of human nature, as to his disillusion many a lawgiver has discovered.

We are led to think of diseases as isolated disturbances in a healthy body, not as the phases of certain periods of bodily development.

The name of a disease is not, as it is continually regarded, a thing.

<sup>7</sup> *Bull. New York Acad. Med.*, 1926, 2. s., ii., 491-501.

Diseases are not even species, such as cats and toads, but abnormal, though not altogether irregular behavior of animals and plants.

Finally, we come to a group of physicians who, like Huxley, have acquired the tolerant, ironic comprehension of the man of the world, who frequently express their views of things with the point and pungency, the sting and tang of epigram. One of the earliest of these was the great medical scholar, Karl Friedrich Heinrich Marx, whom Rohlfs (to whom Marx left his fortune) called "Marx the only":

### MARX

That is the best country which has the fewest diseases, laws and crimes.

He who says more than he sees and hears, sins against nature, since he has two eyes, two ears and only one mouth.

If superstition were curable, the remedy for it would long since have been found; were it mortal, it would long since have been buried.

More than the hand is the tongue the organ which can do most good and evil.

In nature, those who cry out with pain and those who prescribe remedies therefor are different persons: in politics, they are one and the same.

If an author's books die with him, it shows them to be parasites, which survived only through him, with no independent life of their own.

In actual life, pious churchgoers may show up as deceitful tricksters and theorizing physicians as blind empirics.

Physicians see many "diseases" which have no more real existence than an image in a mirror.

Neurotics and psychotics see, hear and smell things which do not exist. Official investigators, similarly afflicted, seem to be perfectly normal.

A masked gout is easier to penetrate than a mask of virtue.

That fear induces weakness and sickness is better demonstrated by a devastating epidemic than by moral philosophy.

Medicine heals doubts as well as diseases.

The individualized physician is, in the truest sense, a man of the world.

In this genre, Osler excelled, apart from his larger utterances on medicine, familiar to all in Dr. Camac's collection:

### OSLER

In all things relating to disease, credulity remains a permanent fact, uninfluenced by civilization or education.

From Hippocrates to Hunter, the treatment of disease was one long traffic in hypotheses.

One of the most delightful sayings of antiquity is the remark of Heraclitus about his predecessors, that they had much knowledge but no sense.

The quest for righteousness is Oriental; the quest for knowledge Occidental.

We doctors have always been a simple trusting folk. Did we not believe Galen implicitly for 1500 years and Hippocrates more than 2000?

Is there anything more doleful than the procession of four or five doctors into a patient's room?

Fully half of the quarrels of doctors are fomented by the tittle-tattle of patients.

*Feminae medicorum tubae* is an old and true saying.

Common sense in medical matters is rare and is usually in inverse ratio to the degree of education.

Fevered haste is not encouraged in military circles . . . and if you will adapt your intellectual progress to army rules . . . you will acquire, little by little, those staying powers without which no man is of much value in the ranks.

In the same trend were Weir Mitchell and Jacobi, both men of large mental mould and professional ideals of the highest order.

#### WEIR MITCHELL

The success of a discovery depends upon the time of its appearance.

The true rate of advance in medicine is not to be tested by the work of single men, but by the practical capacity of the mass.

The truer test of national medical progress is what the country doctor is.

I can remember when older physicians refused to recognize socially a man who devoted himself to the eye alone.

All the vast hygienic, social and moral problems of our restless, energetic labor-saving race are, in some degree, those of the future student of disease in America.

You know alas! that we now use as many instruments as a mechanic, and that however much we may gain thereby, our machines are not labor-saving. For unless men keep ahead of their instrumental aids, these, to coin a word, will merely dementalize them.

How Sydenham dealt with the neurasthenic politicians of his time is interesting reading for those who believe that the American, in his desire for novelty, invented neurasthenia. As for gout, this great master and Mead knew as well how to treat it as we do, for here the laboratory has taught us nothing as yet of helpful utility.

Ever since the Crimean war, nurses have been getting into novels.

While I can understand the patient falling in love with the nurse, I do not as easily comprehend the nurse falling in love with the sick patient. . . . One reluctantly feels the need to change the nurse, which sad necessity I have known to interfere with some promising love affairs.

Do not think too much of the dignity of your profession or what it is beneath you to do. It is a moral disorder of young nurses and, I may add, of young doctors.

A club of men and women was proposed in London a few years ago. It was made of advanced women and of men. It was in an unhappy moment called "The Middlesex Club." That killed it. I do not fancy a middle-sex.

### JACOBI

Treat the man who is sick and not a Greek name.

Do not blame bacteriology for the sins of some few workers.

Nature does not kill and does not heal. If there were consciousness in Nature, she would feel indifferent about what she is, *viz.*, mere evolution.

The magnetic needle of professional rectitude should, in spite of occasional deviations, always point in the direction of pity and humanity.

When old ladies believe in the efficacy of hot chamomile tea, no matter whether they mean Roman or vulgar flowers, in fever and in belly-ache, you hope that not many of that class of old ladies are left. I have survived them.

The Siamese twins were carried over 50,000 miles, but I am sure the only place they knew anything about was their South Carolina village.

This clear-eyed indulgence and tolerant irony, essential to the modern spirit, culminates in the *Charlas de Café* of the great Spanish neurologist Ramón y Cajal, whose scientific and literary achievement will require a separate chapter.

Apart from the larger aspirations and ideals of great physicians, aphorisms about medicine are to be approached with extreme caution and are best taken in small doses. Science cannot be reduced to a pocket formula, truth itself is sometimes an affair of shades of meaning and what is true in one latitude or period of time may even prove false or misleading in another. There are some clinical aphorisms, such as that of Sir William Jenner about pregnancy, which have created ghastly contretemps and brought eminent physicians into disgrace and criminal causes. Epigrams are often perpetrated at the expense of truth and it was written in Scripture that "with knowledge increaseth sorrow." Even "words of wisdom" are apt to be depressing, the dry husks which we would rather not chew if we could help it. I once sat in my lonely room, perusing the Maxims of Queen Christina of Sweden (who murdered Monaldeschi). A vigorous German of my acquaintance entering, seized the *bibelot* (my property) and hurled it

across the room, shouting: *Altjungferphilosophie!—verdammtes Zeug!* One marvels, in this connection, at the current view of poetry as a “burble” and the concern of continental Europe about “medical philosophy.” In the sentences herein strung together, there is enough latent medical philosophy to furnish forth a thousand volumes; but as Alfred Noyes has said, with sovereign intelligence, “there is no precision of expression like the precision of great poetry.”<sup>8</sup> As supreme modes of self-expression, great poetry and great music make the spirit to exult, the heart to expand and the mind to increase in power. There are poetic lines which express the fundamental ideas of science better than science itself, illustrating Sir James Barrie’s dictum that “the scientific man is the only person who has anything new to say and who does not know how to say it.” The poetic fragments of Empedocles contain a clear statement of the doctrine of Conservation of Energy, the essence of the humoral pathology, the popular theory of the determination of sex and even the rationale of the vegetable rennets or *présures*, which have latterly occupied the attention of French chemists:

“But as when rennet of the fig-tree juice  
Curdles the white milk and will bind it fast.”

The *Divina Commedia* of Dante summarizes the scientific knowledge of the Middle Ages. All that is valid in Freudian doctrine (ambivalence of emotion) is in the *odi et amo* of Catullus or the *Zwei Seelen* of Goethe. The *pectora caeca* of Virgil conveys Aristotle’s doctrine of the heart as the seat of intelligence, while an English poet expresses, at once, Harvey’s curious transfer of the intelligence from the heart to the blood and the basic notion in “behaviorism”—

“Her pure and eloquent blood  
Spoke in her cheeks and so distinctly wrought,  
That one might almost say her body thought.”

Of great medical men, Claude Bernard and Charcot, Allbutt and Osler, have, in particular, something of this

<sup>8</sup> In his review of the poems of the physiologist Sherrington. *Nature*, Lond., 1926, cxviii, 364.

heightened perception and luminous expression of things, the lift into the ampler aether, without which aphoristic wisdom of any kind is apt to seem a phase of *taedium vitae*.

In the practice of medicine, a single uttered word may suffice to blast a reputation or to poison the peace of a lifetime. Clinical teachers of the Frerichs or Neusser stamp, who are always proclaiming just how, where and why a patient is going to die, are very poor bedside doctors; and in no sense "healing physicians" (*Heilärzte*). What drives the people to quacks and irregular practitioners is the natural human feeling that one may get well after all, that "relief from suffering is an obtainable goal" and that "the best inspirer of Hope is the best physician." This is the *cruæ*, the present dilemma of socialized medicine and of laboratory medicine, or what the Germans call "guinea-pig medicine." Whether from the viewpoint of the *medico mentiri licet* or of the Hippocratic vow to silence (*Halt's Maul! Dummkopf!*), there is the wisdom of deep feeling in the monody of the Irish poet:

"The silliest charm gives more comfort to thousands in sorrow and pain,  
Than they will ever get from the knowledge that proves it foolish and vain:  
For we know not where we come from and we know not whither we go,  
And the best of all our knowledge is how little we can know."

F. H. GARRISON.